REMARKS

Claims 1-17 are pending in his application. In the Office Action, the Examiner rejected all of Claims 1-17, first, under 35 U.S.C. 101 as being non-statutory, second, under 35 U.S.C. 112, first paragraph, as not being enabled by the specification, and third, under 35 U.S.C. 103 as being unpatentable over U.S. Patent 6,898,564 (Odhner, et al.).

All of these rejections of the claims are respectfully traversed for the reasons discussed below. The Examiner is thus asked to reconsider and to withdraw the rejections of Claims 1-17 under 35 U.S.C. 101, 103 and 112, and to allow these claims.

Also, this opportunity is being taken to amend the independent Claims 1, 6, 11 and 16 to improve the readability of the claims.

Applicant will address each of the rejections below.

Rejection under 35 U.S.C. 101

In rejecting the claims under 35 U.S.C. 101, the Examiner argued that the language of each claim raises a question as to whether the claim is directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a concrete, useful, and tangible result.

All of Claims 1-17, however, are most definitely directed to a practical, concrete, useful and tangible result – obtaining a measure of the size of a distributed system of interconnected computer servers.

Moreover, there is no requirement in 35 U.S.C. 101 that the claim be "tied to" a "technological art." 35 U.S.C. 101 requires that the claim be directed to a useful process, machine,

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manufacture, or composition of matter. Claims 1-17 all satisfy this requirement. Claims 1-5, 16 and 17 are expressly directed to a method for measuring the size of a distributed system of interconnected computer servers. Claims 6-10 are directed to a system for measuring the size of a distributed system of interconnected computer servers, and Claims 11-15 are directed to software for operating a computer to perform method steps for measuring the size of a distributed system of interconnected computer servers. Thus, Claims 1-5, 16 and 17 define processes within the meaning of 35 U.S.C. 101. Also, Claims 6-10 define a machine and Claims 11-15 define a manufacture, within the meaning of 35 U.S.C. 101.

It is noted that the claims involve the use of mathematical equations. The claims, though, do not pre-empt these equations. Also, the claims require more than the mere use of these equations. The claims require that these equations be applied in a specific context – a distributed computer system having a number of CPUs and an amount of memory – and the claims require using those equations in that context and to obtain a specific, practical result – measuring the size of that distributed system.

These claims are directed to useful, practical result. As is well understood, given the very large size of some of today's computer systems, it is very useful to have some way to quantify the sizes of those systems in a way that can be used, for example, to assign manpower to the system. Because a large distributed system of servers may have many different specific types of servers with different capabilities, merely using the number of servers in the system as a measure of the system size may not be particularly helpful. The present invention, in contrast, may be used to provide a helpful, practical and useful measure of that size.

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In addition, each of the independent Claims 1, 6 and 11 set forth specific tangible, physical features. For instance, each of these claims describes a distributed system of interconnected computer servers, and these claims also set forth the CPUs and RAMs installed on the system, and describe details for using the count of CPUs and the RAM to determine a measure of the size of the distributed system. These claims do not describe merely an abstract idea, but instead set forth specific functions and features, and describe how those functions and features are used to achieve a specific, practical result – obtaining a measure of the size of the distributed computer system.

For similar reasons, Claim 16 and Claim 17, which is dependent from Claim 16, also define statutory subject matter within the meaning of 35 U.S.C. 101. These claims are expressly directed to a method for measuring the size of a distributed system of interconnected computer servers. Again, this is a tangible, concrete result that, as mentioned above, is also practical and useful. In addition, Claim 16 positively sets forth a number of specific, tangible, physical features. For example, this claim describes the CPUs installed on the system, the RAM installed on the system, and the claim expressly sets forth a procedure for using these factors, and others, to determine the relative sizes of two servers, and the size of the distributed system of interconnected server.

In view of the above-discussion, Claims 1-17 all define statutory subject matter within the meaning of 35 U.S.C. 101. The Examiner is thus requested to reconsider and to withdraw the rejection of Claims 1-17 under 35 U.S.C. 101.

Rejection of the Claims under 35 U.S.C. 112

In rejecting the claims under 35 U.S.C. 112, the Examiner argued, essentially, that because the claims are not statutory under 35 U.S.C. 101, the specification cannot be enabling. The Examiner, in

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particular, argued that the claims are not enabling to make or use by either a "specific substantial and credible" asserted utility or a well-established utility for deriving a claimed method.

This rejection is traversed because the specification fully enables those of ordinary skill in the art to practice the claimed inventions.

With respect to the reasoning given by the Examiner, Applicant notes that, as discussed above, Claims 1-17 are in fact directed to statutory subject matter. Accordingly, there is no basis for holding the claims not enabled, under 35 U.S.C. 112 on the grounds that the claims are not statutory. Further, even if claims are not statutory, this by itself does not mean that the claims are not enabled.

Moreover, as mentioned above, the specification fully enables those of ordinary skill in the art to practice the claimed inventions.

To elaborate, Claims 1-17 describe two functions, and how these functions are used to obtain a measure of the size of a distributed system of interconnected computer servers. The first of these functions is a function of the count of CPUs installed in each server, and the second function is a function of the amount of RAM installed on each server.

These two functions, the way they are used, and sample values are discussed in detail in the specification, from line 27 of page 7 to line 13 of page 8. There, the specific factors used in these functions and specific equations used to determine these functions are explained in detail, and specific sample values are expressly given. For example, it is explained that the first function includes a weighting factor w_c based on the central processing units installed on the system, and another factor e_c that is based on the system architecture and operating system. Also, it is clearly explained that the second function includes a weighting factor w_r that is based on the amount of RAM on the server, and another factor e_r that is also based on the system architecture and operating

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system. In addition, specific sample values for various factors, including w_c and w_r, are expressly set forth on page 7 of the specification.

Given this clear and detailed teaching, those of ordinary skill in the art would be able to practice the subject matters defined by Claims 1-17 to obtain a measure of the size of a distributed system of computer servers.

In light of the foregoing remarks, the specification fully enables the subject matters of Claims 1-17, and the Examiner is thus asked to reconsider and to withdraw the rejection of these claims under 35 U.S.C. 112.

Thus, the specification also fully enables Claim 16 and Claim 17, which, as mentioned above, is dependent from Claim 16, and the Examiner is requested to reconsider and to withdraw the rejection of Claims 16 and 17 under 35 U.S.C. 112.

Rejection of the claims under 35 U.S.C. 103

Generally, the claims patentably distinguish over the prior art because that prior art does not disclose or suggest the way in which the size of a distributed computer system is measured as described in independent Claims 1, 6, 11 and 16.

The present invention, generally, relates to methods and systems to provide relative measurements of elements of distributed computer systems. This has become a significant challenge. As discussed in detail in the present application, given the very large size of some of today's computer systems, it is very useful to have some way to quantify the sizes of those systems in a way that can be used, for example, to assign manpower to the system. Because a large distributed system of servers may have many different specific types of servers with different capabilities,

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merely using the number of servers in the system as a measure of the system size may not be particularly helpful.

The present invention effectively addresses these issues by providing a comparatively simple and easy procedure to measure the relative sizes of distributed computer systems. Generally, this is based on the count of servers in the system, the amount of RAM in the system, and a normalizing factor representing a given date.

Odhner, et al, the only reference applied against the claims, discloses a load simulation took, which is used for capacity planning. This tool uses the load on the server, as measured by requests per second, to determine the effect of server utilization. A user can then make any necessary changes to the system to meet expected, future load increases.

There is, thus, an important general difference between the present invention and the system shown in Odhner, et al. Odhner, et al is directed to measuring server capacity, while the present invention is directed to determining manpower allocation for a distributed computer system.

This general difference between Odhner, et al. and the present invention is reflected in a number of more specific differences. For example, Odhner, et al. does not take into consideration the count of the number of servers – instead the Odhner, et al. procedure measures total capacity – and Odhner, et al. does not use a normalizing factor representing a reference data.

In the Office Action, the Examiner cited column 5, lines 50-67 of Odhner, et al. as disclosing a CPU count. This portion of Odhner, et al, though, measures the extent of server utilization or the maximum server load, but not a server count. Similarly, the Examiner cited column 6, lines 55-67 of Odhner, et al. as disclosing RAM data. This portion of Odhner, et al, however, does not disclose the use of a normalizing factor based on a reference data.

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Independent Claims 1, 6, 11 and 16 describe important features of the present invention that are not shown in or suggested by Odhner, et al. In particular, each of these claims describes the feature of a first weighted asymptotic function of the count of CPUs installed in each server, and a second weighted asymptotic function of the amount of random access memory installed on each server and a normalizing factor representing a reference data.

These features of the invention are of utility because, as explained in the present application, they help provide a simple but very practical procedure for obtaining a measure of the size of a distributed computer system that, in turn, enables an allocation of manpower to that system.

The other references of record have been reviewed, and these other references, whether considered individually or in combination, also do not disclose or suggest these features of the present invention.

Because of the above-discussed differences between Claims 1, 6, 11 and 16 and the prior art, and because of the advantages associated with these differences, Claims 1, 6, 11 and 16 patentaby distinguish over the prior art and are allowable. Claims 2-5 are dependent from Claim 1 and are allowable therewith; and Claims 7-10 are dependent from, and are allowable with, Claim 6. Likewise, Claims 12-15 are dependent from, and are allowable with, Claim 11, and Claim 17 is dependent from Claim 16 and is allowable therewith. The Examiner is, consequently, respectfully requested to reconsider and to withdraw the rejection of Claims 1-17 under 35 U.S.C. 103, and to allow these claims.

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Conclusion

For the reasons discussed above, Claims 1-17 fully comply with the requirements of 35 U.S.C. 101 and 112 and also patentalby distinguish over the prior art. The Examiner is, hence, asked to reconsider and to withdraw the rejections of Claims 1-17 under 35 U.S.C. 101, 103 and 112, and to allow these claims. If the Examiner believes that a telephone conference with Applicant's Attorneys would be advantageous to the disposition of this case, the Examiner is asked to telephone the undersigned.

Respectfully submitted,

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